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ABSTRACT

This set of mathematics instructional materials are examples of how a teacher can integrate career education into math. Six topics related to the career education concept are featured. "Sample Math Problems" was written for a class studying about jobs in a bakery, and the problems are ones that would be encountered in a bakery. "Careers as Related to Math" is a sample of how career education can be effectively correlated and integrated into math texts (Elementary School Mathematics published by Addison-Wesley) for grades 4, 5, and 6. Occupations requiring high school or college education and/or on-the-job training are listed, and the concepts required for most math-related occupations are itemized. Other materials include an outline of concepts and enrichment materials to be used along with the Addison-Wesley textbook. "Using Math in a Department Store" is a sample lesson where the students not only learn basic questions with fractions, but they also learn that these skills are necessary to work in a department store. "Bricklayers Use Multiplication" cites four multiplication work problems. "A 'Lube' Man Uses Math" gives three job related math problems. "Do You Really Need to Study Math?" is a brief project summary. (BP)

ED 096 477

MATH

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Contents:

Sample Math Problems

Careers As Related To Math

Using Math In A Department Store

Bricklayers Use Multiplication

A"Lube" Man Uses Math

Do You Really Need to Study Math?

CE002087

POTTAWATTAMIE COUNTY SCHOOL SYSTEM

"An Intermediate School District"

The Halverson Center for Education · Route 1 Council Bluffs, Iowa 51501

DR. CALVIN R. BONES, *Supt.*

TELEPHONE (712) 366-0503

CAREER EDU[illegible]MPLE MATH PROBLEMS

Dear Teacher:

These math problems were written for a class who was studying about the jobs in a bakery. Problems could be written to fit the type of problems a class is studying.

This is a sample of how one can integrate career education into math. This shows how career education can be used to enhance the concepts one is teaching by making the subject matter more relevant to everyday life.

Sincerely,

Jacquelyn Crabtree

Jacquelyn Crabtree
Elementary Counselor
Department of Career Education

Math

1. Alice works for the bakery. She has a dozen rolls and she sells six of them to Mrs. Jones. How many rolls are left?

2. Mary needed three batches of bread dough to bake enough bread for one day. If one batch is mixed, how many more batches of dough does Mary need?

3. If the recipe for chocolate cookies that Mary is using will yield 72 cookies and Mary has baked 35, how many more cookies should she be able to make?

4. Joe had an order for 100 cupcakes. He has baked 73. How many more does he need to fill the order?

5. If Joan works at the bakery from 2:00 p.m. to 10:00 p.m. Monday through Friday, how many hours a day does she work? How many hours a week does she work?

6. The bakery received an order for three chocolate doughnuts, three glazed doughnuts, three cherry filled doughnuts, and six french doughnuts. How many doughnuts did this order ask for? How many dozen is this? If doughnuts are five cents each, how much will this order of doughnuts cost?

7. The bakery bakes 50 pies and sells each pie for 69¢. If it cost 40¢ to make each pie, how much money would the bakery make on each pie? How much money would the bakery make on all 50 pies.

Answers

1. 12 rolls minus 6 rolls leaves 6 rolls.

   12 - 6 = 6

2. 3 - 1 = 2 batches of dough, so 2 batches of dough are still needed.

3. 72
   -35
   37

4. 100
   -73
   27 cupcakes (he needs 27 more cupcakes to fill the order)

5. 10:00 p.m.
   2:00 p.m.
   8 The answer is 8 hours

   8 hours x 5 days = 40 hours a week

6. 3 chocolate
   3 glazed
   3 cherry filled
   6 french
   15 The order asked for 15 doughnuts.

   15 - 1-1/4 dozen (15 ÷ 12 = 1 and 3 13ft over or 3/12 = 1/4)

   At 5¢ a doughnut, the order will cost 15 x 5 or 75¢ (not figuring tax).

7. 69¢ - 40¢ = 29¢ profit on each pie

   Since the bakery makes 29¢ on one pie, it would make 29¢ x 50 or $14.50 profit on all 50 pies.

CAREERS AS RELATED TO MATH

By:

Phyllis VanFossan
6th Grade Teacher
Lake Elementary School
Council Bluffs School System
Council Bluffs, Iowa

Career Education Workshop
March 6-17, 1972

April 28, 1972

V

POTTAWATTAMIE COUNTY SCHOOL SYSTEM

"An Intermediate School District"

The Halverson Center for Education · Route 1 Council Bluffs, Iowa 51501

DR. CALVIN R. BONES, *Supt.* TELEPHONE (712) 366-0503

Dear Teacher:

This material was developed during a career education workshop conducted by the Pottawattamie County School System and the Council Bluffs Community School System on March 6-17, 1972.

This material was written by Phyllis VanFossan, an elementary teacher in the Council Bluffs Community School System in Council Bluffs, Iowa. Phyllis has coordinated career education materials with the basic math text for the Council Bluffs School System* for grades fourth, fifth and sixth.

This is a sample of how career education can be effectively correlated and integrated into math texts. The use of the career education materials in mathematics makes the subject matter more relevant to the students.

The approach that Phyllis has used here could be used with any math textbook series at any grade level.

Jacquelyn Crabtree

Jacquelyn Crabtree
Elementary Counselor
Department of Guidance and
Vocational Education
Director of Career Education
Workshop

* The basic textbook math series in the Council Bluffs School System is the Elementary School Mathematics by Addison-Wesley.

CAREERS AS RELATED TO MATH

by
Phyllis VanPossan

I. Occupations requiring high school education and/or on-the-job training:

Carpenter
Mechanic
Electrician
All-round Machinist
Farmer
Insurance Agent
Waitress or Waiter
Beauty Opertor
Barber
Cashier
Salesman
Real Estate Salesman
Bookkeeper
Telephone Operator
Shipping - Receiving Clerk
Postal Clerk
Bank Teller
Computer Programmer
Surveyor
Interior Decorator
Draftsman
Pilot
Laboratory Technician
Musician
Accountant
Auditor
Various military careers

II. Occupations requiring college education:

Statistician
Actuary
Geologist
Architect
Teacher
Astronaut
Librarian
Doctor
Nurse
Optometrist
Pharmacist
Airline Pilot

III. Concepts required for most math-related occupations

A. Addition and subtraction

1. Strive for accuracy

B. Bases - especially bases two and eight as related to computers

C. Understanding money - especially being able to make change quickly and accurately

D. Scale drawing - as applied to drawing blueprints

E. Geometry

F. Decimals

G. Measuring

H. Seeing differences; e.g., small-large, near-far

I. Banking procedures

IV. Careers and Math in Grade Four

A. Materials and/or resources

Elementary School Mathematics, Addison-Wesley

B. Chapter Two

1. Concepts: Addition and subtraction concepts, money-dollar and decimal-point notation, and seeing universal relationships

2. Enrichment materials*

a. Records: RC-366, "A Man's Work"
Airline Ticket Agent
Grocery Checker
Gas Station Salesman

b. Filmstrips: FS-686, Dollars and Cents
(Anything suitable to addition and subtraction)

c. Films: S-321, Arithmetic in the Food Store
S-256, More and Less

d. Kit 32, Spinner Games (whole numbers)

C. Chapter Three

1. Concepts: Multiplication and division concepts

2. Enrichment materials*

a. Records: RC-366, "A Man's Work"
Baker
Foundry Worker
Carpenter
Tailor

b. Filmstrips: FS-204, Story of Linear Measurement

c. Films: S-316, Measurement in the Food Store
S-626, Story of Weights and Measures

*Enrichment materials are available from Halverson Center for Education.

V. Careers and Math in Grade Five

A. Materials and/or resources

Elementary School Mathematics, Addison-Wesley

B. Chapter One

1. Concepts: Seeing differences and work with other bases

2. Enrichment materials*

a. Records: RC-366, "A Man's Work"
Data Processor

b. Filmstrips: Anything relevant to big and little numbers or computers and their place in occupations

c. Films: S-951, Computers

C. Chapter Five

1. Concepts: Geometry and measuring

2. Enrichment materials*

a. Records: RC-366, "A Man's Work"
Carpenter
Tailor
Pattern Maker

b. Filmstrips: FS-204, Story of Linear Measurement

c. Films: Anything related to geometry and a career that makes use of it

D. Chapter Six

1. Concepts: Addition and subtraction concepts, multiplication and division concepts, money

2. Enrichment materials*

a. Records: RC-366, "A Man's Work"
Airline Ticket Agent
Gas Station Salesman
Grocery Checker

b. Filmstrips: FS-151, Percentage and Using Money
FS-686, Dollars and Cents

*Enrichment materials are available from Halverson Center for Education.

c. Films: S-321, Arithmetic in the Food Store

d. Kit 32, Spinner Games (whole numbers)

E. Chapter Eight

1. Concepts: Fraction concepts, experience with equivalent fractions

2. Enrichment materials*

a. Records: RC-366, "A Man's Work"
Baker
Foundry Worker
Tool and Die Maker
Carpenter
Electrician
Aircraft Refueler
Tailor
Pattern Maker
Telephone Repairman

b. Filmstrips: FS-280, Scale Drawings and Tables

c. Films: Any film related to fractions and their relation to the "world of work"

d. Kit 33, Spinner Games (fractions)

F. Chapter Eleven

1. Concepts: Decimals - using decimals in measurement; using notation for money to decimal notation; addition and subtraction of decimals

2. Enrichment materials*

a. Records: RC-366, "A Man's Work"
Airline Ticket Agent
Grocery Checker
Gas Station Salesman
Plumber
Electrician
Long-haul Truck Driver

b. Filmstrips: FS-148, Decimal Fractions and Reading Instruments

c. Films: S-795, Percent - Why and How

*Enrichment materials are available from the Halverson Center for Education.

VI. Careers and Math in Grade Six

A. Materials and/or resources

Elementary School Mathematics, Addison-Wesley

A Teaching Unit on Banking**

Road Map Math**

Area Measurement**

B. Chapter One

1. Concepts: Place value, reading and writing large numbers, bases other than ten, exponents and powers of ten, and expanded notation using exponents

2. Enrichment materials*

a. Records: RC-366, "A Man's Work"
Data Processor
Electrician
Meter Reader

b. Filmstrips: Any filmstrip related to large numbers, exponents or bases other than ten, and the "world of work"

c. Films: S-951, Computers
S-256, More and Less

C. Chapter Three

1. Concepts: Review of addition, subtraction, multiplication and division; money problems; time, rate and distance

2. Enrichment materials*

a. Records: RC-366, "A Man's Work"
Airline Ticket Agent
Grocery Checker
Gas Station Salesman
Long-haul Truck Driver

** Available from Mr. Duane Lewis, Coordinator of Mathematics
Council Bluffs School System
207 Scott Street
Council Bluffs, Iowa (51501)

* Enrichment materials are available from the Halverson Center for Education.

b. Filmstrips: FS-686, Dollars and Cents

c. Kit 32, Spinner Number Games (whole numbers)

d. Films: S-321, Arithmetic in the Food Store

e. Pamphlets: Road Map Math**

A Teaching Unit on Banking**

D. Chapter Five

1. Concepts: Geometry and measurement; area and perimeter; and segments, angles, and triangles

2. Enrichment materials*

a. Records: RC-366, "A Man's Work"
Foundry Worker
Carpenter
Telephone Repairman

b. Filmstrips: FS-204, Story of Linear Measurement

c. Films: Any film that relates geometry and measurement to the "world of work"

d. Pamphlets: Area Measurement**

E. Chapter Six

1. Concepts: Fractions - equivalent fractions, transition from fractions to numbers

2. Enrichment materials*

a. Records: RC-366, "A Man's Work"
Baker
Foundry Worker
Tool and Die Maker
Carpenter
Plumber
Tailor

b. Filmstrips: Any relating fractions to careers

c. Films: S-316, Measurement in the Food Store

d. Kit 33, Spinner Games (fractions)

** Available from Mr. Duane Lewis, Coordinator of Mathematics (See page 6)

* Enrichment materials are available from the Halverson Center for Education.

F. Chapter Ten

1. Concepts: Decimals - fractions and decimals, addition and subtraction of decimals, decimals and money notation, scientific notation

2. Enrichment materials*

a. Records: RC-366, "A Man's Work"
Airline Ticket Agent
Grocery Checker
Gas Station Salesman
Banker
Electrician

b. Filmstrips: FS-148, Decimal Fractions and Reading Instruments

FS-151, Percentage and Using Money

c. Films: S-321, Arithmetic in the Food Store
S-795, Percent - Why and How

d. Pamphlets: Teaching a Unit on Banking**

e. Kit 33, Spinner Games (fractions)

G. Chapter Twelve

1. Concepts: Percent - notation for percent; graphs and diagrams; interest

2. Enrichment materials*

a. Records: RC-366, "A Man's Work"
Banker
Electrician
Telephone Repairman

b. Filmstrips: FS-151, Percentage and Using Money
FS-280, Scale Drawings and Tables

c. Films: S-795, Percent - Why and How

d. Pamphlets: Teaching a Unit on Banking**

*Enrichment materials are available from the Halverson Center for Education.

SOURCES FOR CAREER MATERIAL

Employment Outlook for Accountants
Bulletin No. 1550-1
U. S. Department of Labor
Bureau of Labor Statistics
U. S. Government Printing Office
Washington, D. C. 20402

Employment Outlook for Architects
Bulletin No. 1550-5
U. S. Department of Labor
Bureau of Labor Statistics
U. S. Government Printing Office
Washington, D. C. 20402

Employment Outlook for Automobile Service and Sales Occupations; Automobile, Truck and Bus Mechanics; Body Repairmen; Painters; Upholsterers; Gas Station Attendants; Salesmen; Parts Countermen; Service Advisors
Bulletin No. 1550-6
U. S. Department of Labor
Bureau of Labor Statistics
U. S. Government Printing Office
Washington, D. C. 20402

Career Opportunities in Aviation
National Aerospace Education Council
Room 616 Shoreham Building
806 15th Street, N. W.
Washington, D. C. 20005

Employment Outlook for Bookkeeping Workers, Office Machine Operators
Bulletin No. 1550-19
U. S. Department of Labor
Bureau of Labor Statistics
U. S. Government Printing Office
Washington, D. C. 20402

SOURCES FOR CAREER MATERIAL

Jobs in Building Construction Trades
Science Research Associates, Inc.
250 E. Erie Street
Chicago, Illinois 60611

Employment Outlook for Commercial Artists, Industrial Designers, Interior Designers and Decorators
Bulletin No. 1550-19
U. S. Department of Labor
Bureau of Labor Statistics
U. S. Government Printing Office
Washington, D. C. 20402

Employment Outlook for Earth Scientists, Geologists, Geophysicists, Meteorologists, Oceanographers
Bulletin No. 1550-29
U. S. Department of Labor
Bureau of Labor Statistics
U. S. Government Printing Office
Washington, D. C. 20402

General Farmer
Chronicle Guidance Publications, Inc.
Moravia, New York

Food Store Workers
Science Research Associates, Inc.
259 E. Erie Street
Chicago, Illinois 60611

Employment Outlook for Lawyers
Bulletin No. 1550-45
U. S. Department of Labor
Bureau of Labor Statistics
U. S. Government Printing Office
Washington, D. C. 20402

Employment Outlook for Librarians
Bulletin No. 1550-46
U. S. Department of Labor
Bureau of Labor Statistics
U. S. Government Printing Office

SOURCES FOR CAREER MATERIAL

Life Insurance Agent
Chronicle Guidance Publications, Inc.
Moravia, New York

Employment Outlook for Machining Occupations: Instrument Makers, Machinists, Machine Tool Operators, Tool and Die Makers, Setup Men, Layout Men
Bulletin No. 1550-47
U. S. Department of Labor
Bureau of Labor Statistics
U. S. Government Printing Office
Washington, D. C. 20402

A Career in Medicine, Neal H. Rosenthal
B'nai B'rith Vocational Service
1640 Rhode Island Avenue, N. W.
Washington, D. C. 20036

See Your Future in Pharmacy (Rev.)
American Pharmaceutical Association
2215 Constitution Avenue, N. W.
Washington, D. C. 20037

Dimensions of Veterinary Medicine
American Veterinary Medical Association
600 S. Michigan Avenue
Chicago, Illinois 60605

Employment Outlook for Technicians: Engineering and Science, Draftsmen
Bulletin No. 1550-88
U. S. Department of Labor
Bureau of Labor Statistics
U. S. Government Printing Office
Washington, D. C. 20402

USING MATH IN A DEPARTMENT STORE

By

Jacquelyn Crabtree

POTTAWATTAMIE COUNTY SCHOOL SYSTEM

"An Intermediate School District"

The Halverson Center for Education · Route 1 Council Bluffs, Iowa 51501

DR. CALVIN R. BONES, *Supt.* TELEPHONE (712) 366-0503

May 31, 1972

Dear Teacher:

This math lesson was written to illustrate how career education can be integrated into math and how career education can be used to make the subject matter more relevant to the students.

In this lesson, the students not only learn basic operations with fractions, but they also learn that these skills are necessary to work in a department store.

This sample lesson can be used as a guide for developing others. The same method used here could be used to show the relationship between math and any number of different occupations.

If you're creative, imaginative and like to try new ideas, try your hand at relating math skills to the world of work. I think that you'll find it is an exciting experience!

Sincerely,

Jacquelyn Crabtree

Jacquelyn Crabtree
Elementary Counselor

USING MATH IN A DEPARTMENT STORE

By
Jacquelyn Crabtree
Elementary Counselor

Under the
Direction and Supervision
of
Earl E. Winters, Director
Department of Career Education
Pottawattamie County School System

May, 1972

USING MATH IN A DEPARTMENT STORE

Fractions are used in the business world. One place that fractions are used is in a department store. After completing these ten problems, do the following activities:

1. List at least five ways fractions can be used in a department store.
   1.
   2.
   3.
   4.
   5.

2. Can you think of other ways, in addition to the ones given in these problems, how employees of a department store use fractions? (List any ways you can think of.)

3. Do you see why it is important to learn how to work fractions? (Explain your answer.)

4. Can you name other workers who must use fractions in their jobs?

5. What kind of person do you like to have wait on you in a store when you buy clothes? Why?

6. Would you like to be a salesman? (Why or why not)

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1. Mr. Jones wanted to buy a hat. He tried on a size 7-1/4, but it was too small. He tried a size 7-3/4, but it was too big. The following sizes were available in the style hat that he wanted. Which of these size hats would you suggest that he try? (Tell why.)
   Sizes:
   1-7/8, 8-1/2, 7-1/2,
   7-5/8, 7-3/8, 8-1/4

2. Mary began working as a clerk in a department store. One day there was a sale. The spring dresses were 1/3 off the regular price. The spring coats were 1/4 off the regular price. Ladies suits were half price. Mrs. Simmon brought the following items to the counter:
   1. a spring dress, regular price $25.00
   2. a spring coat, regular price $50.00
   3. a suit, regular price $40.00

Pretend that you are Mary. In the space below show how you would figure the price of each article. How much would the dress cost? How much would the coat cost? How much would the suit cost? What would the total bill be?

3. Joan wanted to buy a pair of black boots. She wore a size 7-1/2AA. The only pair of black boots in the store were size 8-1/2AA. Would these boots fit Joan? (If not, what is the difference in the sizes?) Should Joan buy these boots? (Why or why not?)

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4. If a sweater is on sale for 1/4 off the regular price, what price should the clerk put on it if it regularly sells for $35.00 (round off to the nearest cent). Show your work.

5. Blouses were on sale for $4.00 each. At regular price they are $6.00 each. A woman asked the clerk how much the blouses were reduced. Should the clerk reply 1/2, 1/4, or 1/3? How do you know? Show your work.

6. Mona wanted some fabric to make a dress. In the fabric department of the store she found some orange double knit material. The material cost $6.00 a yard. Since it was sixty inches wide, Mona only needed 1-1/2 yards to make her dress. How much would the material cost Mona? Show your work.

BEST COPY AVAILABLE

7. Marge works in a fabric department of a large store. Mrs. Smith purchases 1-3/4 yards of corduroy material at $1.35 a yard, 2/3 yard of crepe at $3.00 a yard, and 6-3/8 yards of double knit material at $7.00 a yard. How much did her bill come to? Show your work.

8. Julie told the clerk that she wanted 2/3 yards of felt. The clerk measures the material on a yardstick attached to the cutting table. How many inches of material should she cut for Julie? How many feet of material will this be?

9. During a pre-Easter sale the store sold 3/4 of the blouses on sale. If there were sixty blouses on sale, how many did the store sell? (Show your work.)

10. Mark is the owner of a department store. Recently, he was reading over the employees' monthly time sheets. John Brown's time sheet caused Mark concern. Using the chart below, answer the following questions.

1. How many days of work did John miss the first week?
2. How many days of work did John miss the second week of the month?
3. How many days of work did John miss the third week of the month?
4. How many days of work did John miss the fourth week of the month?
5. How many days each week was John supposed to work?
6. What fraction of the first week was John absent?
7. What fraction of the second week was John not at work?
8. What fraction of the third week was John not at work?
9. What fraction of the fourth week was John not at work?
10. What fraction of the total number of work days for this month had John not reported for work? (Show your work.)

MONTHLY TIME SHEET

Date	M		T		W		Th		F		Sa		Hours Worked	Days Worked	Days Absent	Total Work Days
	IN	OUT	IN	OUT	IN	OUT	IN	OUT	IN	OUT	IN	OUT				
April 3-8	8:00 1:00	12:00 5:00	8:00 2:00	12:00 4:00									M - 9 T - 6 Total 15	2	4	6
April 10-15							8:00 1:00	11:00 4:00	8:00 2:00	12:00 4:00	8:00 2:00	11:00 4:00		3	3	6
April 17-22	8:00 1:00	12:00 5:00	8:00 2:00	12:00 4:00	9:00 2:00	1:00 3:00	10:00 12:00	11:00 5:00						4	2	6
April 25-29					9:00 2:00	11:00 4:00	6:00 5:00	11:00 6:00	11:00	2:00				3	3	6
Total														12	12	24

Thought Question: If you were Mark, what would you do about John?

ANSWER SHEET

1. 7-1/2 because 7-1/2 is larger than 7-1/4, but smaller than 7-3/4.
   7-1/2 - 7-1/4 = 1/4
   7-3/4 - 7-1/2 = 1/4

   7-5/8 because it is larger than 7-1/4 and smaller than 7-3/4
   7-5/8 - 7-1/4 = 7-5/8 - 7-2/8 = 3/8
   7-3/4 - 7-3/8 = 7-6/8 - 7-5/8 = 1/8

   7-3/8 because it is larger than 7-1/4 and smaller than 7-3/4
   7-3/8 - 7-1/4 = 7-3/8 - 7-2/8 = 1/8
   7-3/4 - 7-3/8 = 7-6/8 - 7-3/8 = 3/8

2. 1/3 of $25.00 equals the amount off of the regular price of the dress
   1/3 of $25.00 = $8.33, so the price of the dress would equal $25.00 - $8.33 or $16.67

   1/4 of $50.00 equals the amount off the regular price of the coat
   1/4 of $50.00 = $12.50, so the price of the coat on sale would be $50.00 - $12.50 or $37.50

   1/2 of $40.00 equals the amount off the regular price of the suit
   1/2 of $40.00 = $20.00, so the sale price of the suit would be $40.00 - $20.00 or $20.00

   The total bill sould be $16.67
   37.50
   20.00
   $74.17

3. 8-1/2 - 7-1/2 = 1

   No, the boots would not fit Joan. They are one size too big. No, Joan should not buy the boots because they would not fit her. If she wore them she might get blisters on her feet.

4. 1/4 of $35.00 = $8.75. Sale price of the sweater would be $35.00 - $8.75 or $26.25

5. $6.00
   - 4.00
   $2.00 $2.00 is what part of $6.00? 2/6 = 1/3

6. $6.00 X 1-1/2 = $6.00 + $3.00 = $9.00
   $9.00 is the price of the material

7. $1.35 X 1-3/4 + $3.00 X 2/3 + 6-3/8 X $7.00 = total of bill =
   $2.36 + $2.00 + $44.63 = $48.99

8. 2/3 of 36 inches (number of inches in a yard) = 24 inches

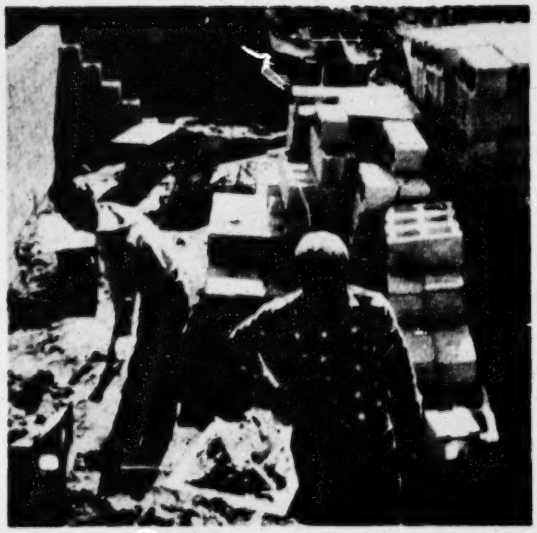
   24 inches divided by 12 inches (number of inches in a foot) equals the number of feet in 24 inches, or <u>2 feet</u>.

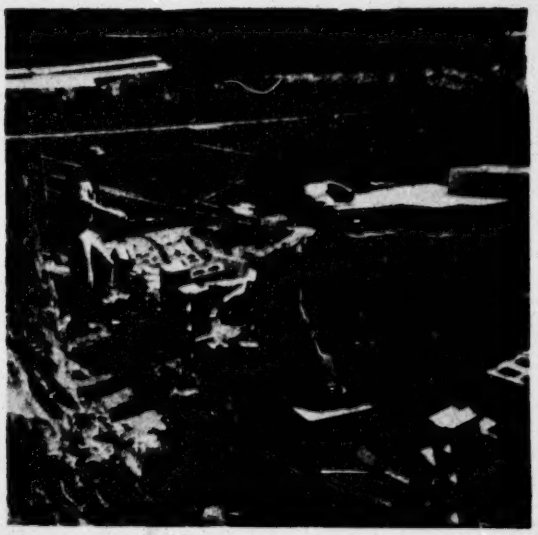
9. 3/4 of 60 = number of blouses sold during the sale

   3/4 of 60 = 45

10.
   1. missed 4 days the first week
   2. missed 3 days the second week
   3. missed 2 days the third week
   4. missed 3 days the fourth week
   5. should have worked six days each week
   6. John was absent 4/6 or 2/3 of the first week
   7. John was absent 3/6 or 1/2 of the second week
   8. John was absent 2/6 or 1/3 of the third week
   9. John was absent 3/6 or 1/2 of the fourth week
   10. John was absent 4+3+2+3 or 12 days out of 24 days or 12/24 of the month so he was absent 1/2 of the time.

Thought question: Student's own opinion, any answer is correct. Points to be noted should include: the lack of responsibility on John's part when not showing up for work. Before firing John, employer should check and see if there is a valid reason for John being absent so much, such as illnesses. Employer should check with the immediate supervisor to see if he has called John on it and if not why he hasn't called John on his high record of absenteeism. Employer should make sure that John has been warned that being absent 1/2 of the time is not acceptable to the company and should personally talk to John if the supervisor has failed to do so.





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These brick-layers use multiplication to work problems about area.

1. This house will be 80 ft. by 50 ft. What is the area of the house?

2. The basement wall needs to be 10 ft. high. Each brick is 8". How many bricks deep should the men lay the basement wall?

3. You need 2 gallons of water for each 5-pound bag of cement. How much water would you need for 20 pounds of cement?

4. One wall is 65 bricks long and 15 bricks high. How many bricks would the men need to order for that wall?

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1. This "lube" man earns $2.10 an hour. Each day he works 8 hours. How much does he earn each day? In 5 days? In 20 days?

2. One day he came to work at 7:30. He took one-half hour off for lunch and left work at 5:30. How many hours did he work that day?

3. This worker changes oil in cars. Each car takes 5 quarts of oil. He must do 13 cars this day. How many quarts of oil does he need to order?

BRIEF PROJECT SUMMARY

"Do You Really Need To Study Math?"

Written and Recorded
by
Ted Stilwill and Francis Children

Using a set of 31 slides with a tape narration that depicts various people at work in local businesses, we have attempted to show how different mathematical skills are necessary or useful in a wide variety of occupations. Addition, subtraction, multiplication and division are featured, but other skills including counting, decimals, fractions, percentages, ratios and geometry are also mentioned.

While the quality of this presentation is questionable, it does demonstrate how a teacher might relate classroom math to the "outside world." Perhaps an audio-visual approach might provide an occasional interest boost. This same type of procedure might be just as easily applied to the other subject areas.

Most simply, we feel that the teacher can apply his or her own knowledge of the world of work to add meaning to the classroom.

Note: The slide-tape presentation is available through the Career Education Department of the Pottawattamie County School System.